5:Sarkar D-5 (1948)1953 AZ2 Andamans AZ2

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Blood Groups from the Andaman and Nicobar Islands

By

S. S. Sarkar

The following blood group data were collected during the months of February-April, 1948 in the course of a visit to Little Andaman, Long Island and Car Nicobar by a party under Dr B. S. Guha from the Department of Anthropology, of which the present writer was a member. The data grouped according to the different tribes are as follows :—

143 / 21 / 114 [128]

Onges

34 Onges, 19 males and 15 females, were grouped from the island of Little Andaman. They were collected from the settlements round about Bumila Creek, Dugong Creek and the village Tambebui on the N. E. part of the island. The blood group distribution is as follows :—

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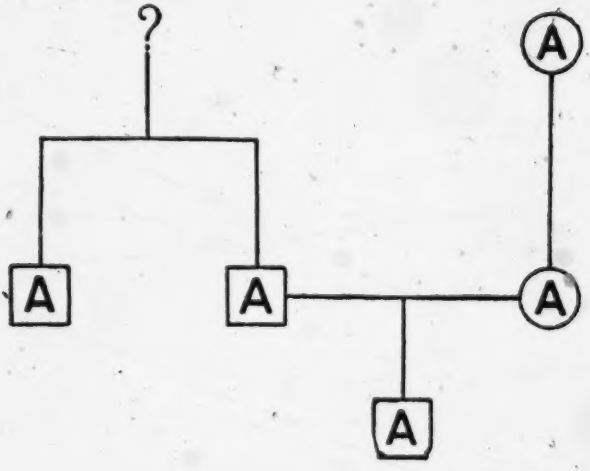
O	5	14·71%
A	23	67·65%
B	2	5·88%
AB	4	11·76%
	34	

The predominance of group A was already noticeable from Chaudhuri's (Gates, 1940) earlier study of 5 Onges, 3 of whom belonged to A and 1 each to Group O and B.

This will be also apparent from the following pedigree, where three generations show only A.

[601]



[p. 25]

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A 114 143 582

Owing to linguistic difficulties it was not possible to find out the relationships in the majority of cases. It is, however, evident that inbreeding must be very high in such a small, isolated and closed population.

Jarawas

A 114 143

Gates (1940, 1948) reported blood groups of the five Jarawas captured at Bluff Island in September, 1938. Of these five, the adult woman and her eldest son died at Port Blair during Japanese occupation. It appears that Chaudhuri did not group the blood of the 4th son born at Port Blair to the above captured woman, since that would have made the total number 6 (mother +4 sons + 1 unrelated girl) instead of 5. This boy (Pl. IX, Fig. 3) is now 13 years old and was found like his mother and brothers to be belonging to Group O. The blood samples of the other three children were found to be O. The children (Pl. IX) are now living in a Car Nicobar mission.

Andamanese

A 161

The Andamanese population has undergone very serious depletion. The total strength was estimated to be about 37 as compared with 90 of the census A 125 figure of 1931. Only 21 of these people could be tested from the islands of 143 Havelock and Neil. Their blood groups are :—

O	2	9·52%
A	12	57·14%
B	5	23·81%
AB	2	9·52%
	21	

Nicobarese

N 361 N 125 [64] 143

The majority of the Nicobarese were grouped at the Car Nicobar island. A group of 15 people from Chaura and a patient suffering from infantile paralysis from Nankauri were included in the sample. All the 16 of the latter group belonged to Group O.

The Nicobarese blood group distribution is as follows :—

	O	A	B	AB	p	q	r	D/σ
	117	5	14	0				
%	86·03	3·68	10·29	..	·019	·054	·928	0·5

N 164

Car Nicobar was visited towards the decline of the infantile paralysis epidemic. There were only 24 patients in the hospital. A good number, N 734 however, of those who escaped death but were otherwise invalidated were 125 examined.

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[192
291

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[301]

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Plate IX. Captive Jarawa Children.
[P. 26(A)]

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[P. 26(B)]

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PLATE IX.
Captive Jarawa Children

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Nicobars AZ7

N
143
734
125

The blood group distribution of 39 such invalids is as follows :—

	O	A	B	AB	Total
	34	1	4	0	39
%	87·18	2·56	10·26	0	

When this is compared with the normal unaffected sample the following figure is obtained :—

	O	A	B	AB	Total
	83	4	10	0	97
%	85·57	4·12	10·31	0	

There is thus no significant difference between the affected and normal samples.

Negrito Affinities

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143
A
[582]

While nothing definite can be said of the Jarawas, the other two Negrito groups, the Onges and the Andamanese, show very high incidence of the blood group A. This is accompanied by a very low O in both the cases. In breeding in such isolated populations of small size is normally very high and this has possibly resulted in the dominant A mendelising over the recessive O. It appears that the Negritos, here and elsewhere, possess a high frequency of A with little B, which is probably due to intermixture. This will be apparent from the following table :—

	O	A	B	AB	Investigator
	%	%	%	%	
Negrito (Philippines) (297)	48·4	33·3	14·1	4·0	Grove
Bushmen (615) . .	56·1	29·6	7·5	6·8	Pijper
Onges (34) . . .	14·71	67·65	5·88	11·76	Author
Andamanese (22) . .	9·9	59·09	22·71	9·09	Author

Among the Andamanese proper, the half breeds form probably one half of the population and the high B of 22·72 per cent must be due to mixture with outside peoples. The Onges are more isolated than the Andamanese and it is difficult to account for the 5·88 per cent of B among them. The percentage of AB is also high enough to warrant the presence of more B.

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Gates (1948) is of opinion that: "The blood groups of Negritos and Australoids must have been very different then, as they are now, the former being high in B, the latter having A without B".

Earlier Negrito data from other sources, as also the results of this investigation, do not support the above contention. Both the Australoids and the Negritos have been found to be high in A. The Negrito peoples of the Andaman Islands, although they are now isolated in the different islands, probably all belong to the same ethnic stock and when their blood group data are pooled together the following percentages are obtained :—

		O	A	B	AB	Total
Total . . .		13	36	7	6	62
Negritos*(Andaman Islands) . .	%	20·97	58·07	11·29	9·67	

The total number of 62 consists of 34 Onges from Little Andaman, 22 Andamanese, 6 Jarawas. When the 22 Andamanese, who are definitely known to be mixed, are exempted from the above total, the position is as follows :—

	O	A	B	AB	Total
	11	23	2	4	40
%	27·50	57·50	5·00	10·00	

It thus appears that more than half the Negrito population belong to group A and their similarity with the Australians in this respect, associated with the enormous differences in physical features between the two, still remains to be satisfactorily explained.

Nicobarese Blood Groups

The Nicobarese blood groups present a picture so far unknown to S.-E. Asia. The high frequency of O is characteristic of the American Indians. The Nicobarese are believed to have migrated into their present habitat from Lower Burma. Little is known of blood group distribution from Burma. Mollison and Reddy (1946) have published a set of data from 229 peoples, comprising 155 pure Burmans, 57 Karens, 13 Chins and 4 Kachins. They show the following blood group distribution :—

O	A	B	AB
36·2	26·2	29·7	7·9

* Chaudhuri's sample of 5 Onges (Gates, 1940) could not be combined with the present author's sample lest the same person is included in both the data. There are chances of such duplication in small populations as such.

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Nicobars AZ7
Maori OZ4

The Nicobarese values thus differ widely from the above. It will not be out of place here to mention of Eickstedt's samples from Upper Burma (Steffan, 1932) which gives 60% of O and 40% of B and stands somewhat closer to the Nicobarese data than the above figures of Mollison and Reddy.

In spite of the close cultural affinities of the Nicobarese with those of Malaya and Indo-China, in respect of their aversion to milk, the outrigger canoe, artificial deformation of head, the Malayan form of sniffing cheeks (Malay kiss), etc., the Nicobarese have so far remained ignorant of agriculture. It appears, therefore, that the Nicobarese migrated from a habitat where agriculture was unknown and it is among such peoples that their close congeners could be found.

Negritos, Australians and Polynesians

The above three ethnic stocks, though widely varying in physical features have in common the high element of blood group A. It remains to be seen how they stand in respect of the sub-groups of A and the MN factors. So far only the Australians have been subjected to the study of MN factors (Birdsell and Boyd, 1940).

The similarity of the above three peoples in respect of the blood groups was pointed out to some extent by Howells (1934) and as such Gates' statement (p. 28) is probably unjustified. The percentages of B come to 14·1 in the case of Negritos of the Philippines (Grove, 1926), to 5·00 in the case of those from the Andaman Islands and to 2·2 in the case of the Hawaiians* (Nigg, 1930). Samoa with its fairly large content of B of 19·4% (Shapiro, 1940) is already a problem. The paucity of B among the Australians is already well-known. All these appear to show that B is a later instrusion in this area and A was predominant among the Negritos and the Australoids as it is now. The Polynesian movements began towards the dawn of Christian era from Indonesia when B did not probably reach there. This might have influenced the Nicobarese as well and the 3·68% of A may be Polynesian in origin.

* Time is ripe enough for discarding Phillips Maori data by now (see Shapiro, Howells, Graydon and Simmons, and Godley). They are compared with the recent data below :—

O	A	B	AB	
47·5%	39·5%	1·0%	12·0%	(Phillips, 1931 n=200)
41·2%	58·1%	0·7%	0	(Graydon & Simmons, 1945 ; n=267)
45·26%	48·74%	4·07%	1·91%	(Godley, 1946-47 ; n=835)
44·27%	52·96%	1·57%	1·20%	(Paddock, 1946 ; n=1335)

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Nicobars AZ7
Maori OZ4

000 It will be thus futile to argue that the Negritos, who by race and culture, appear undoubtedly to be the oldest inhabitants of this area, were strong in B, unless we assume that B is lost. At least that will be similar to the supposition of Phillips who contented that the Morioris, the ancestor of the present Maoris, belonged to group B.

N A 143

Summary

(1) 34 Onges grouped from the island of Little Andaman show the following distribution :—

O—14·71%, A—67·65%, B—5·88% and AB—11·76%.

(2) 22 Andamanese show the following distribution :—

O—9·09%, A—59·09%, B—22·72% and AB—9·09%.

(3) 4 Jarawa children were all found to belong to group O.

(4) 136 Nicobarese belong to the following groups :—

O—86·03%, A—3·68%, B—10·29%.

N A 149 143 174

(5) Negrito affinities are discussed. Nicobarese blood groups show the highest O in India and Indonesia. Polynesian elements are probably evidenced by the presence of A.

(6) The Negritos, the Australians and the Polynesians all have high A and the B as seen in Samoa or Melanesia probably reached these islands after the Polynesian movements began in the dawn of Christian era.

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